Candidate Information

Position: Research Fellow in Vaccinology
School/Department: Wellcome-Wolfson Inst for Experimental Medicine
Reference: 24/111629
Closing Date: Monday 4 March 2024
Salary: £37,841 per annum
Anticipated Interview Date: Thursday 14 March 2024
Duration: Available until 31 August 2026

JOB PURPOSE:

To be a highly productive and collaborative laboratory researcher in the Valvano and Ingram research groups. This project should be attractive to any suitable candidate interested in developing anti-bacterial vaccines utilising in vitro and in vivo models, particularly neonatal models, to test vaccine efficacy. The laboratory teams are highly collaborative, carrying out basic and clinical research with partners locally, nationally, and internationally. This position is suited to an ambitious, productive, and collaborative individual with excellent capacity to work from own initiative and meet deadlines, keen attention to detail and strong organisation skills. The successful candidate will have a strong background in vaccinology, molecular microbiology, immunology (specifically T cell biology), and will seek ambitious and challenging research projects in a well-supported environment.

MAJOR DUTIES:

1. Develop, plan, and deliver vaccine research within a research programme aimed at both vaccine antigen discovery and understanding the mechanisms of protection against bacterial infection. Techniques may include molecular cloning, cell culture, protein purification, and in vivo experimental models including neonatal infection models.
2. Maintain up-to-date knowledge of the field of interest at the cutting edge and communicate same to the group.
3. Design, develop, and refine experimental models and experiments to obtain reliable and reproducible data in models of immunity and infection.
4. Carry out analyses, critical evaluation and interpretation of experimental data and the literature using methodologies and other techniques appropriate to area of research.
5. Present regular progress reports on research to members of the research group, other groups within the University and to external audiences nationally and internationally to disseminate and publicise research findings.
6. Prepare, in consultation with co-authors, material for publication in national and international journals and presentations at international conferences.
7. Assist grant holder in the preparation of funding proposals and applications as well as project progress reports to external bodies.
8. Prepare competitive applications for own funding including travel grants, project grants and fellowship applications.
9. Carry out routine administrative tasks associated with the research projects/group to ensure that projects are completed on time and within budget and that the group functions efficiently. These might include organisation of project/group meetings and documentation, financial control, stock management/procurement, risk assessment of research activities and development of SOPs. Carry out routine administrative tasks associated with the day-to-day running of the research group in a communal lab setting.
10. Carry out school/undergraduate/post-graduate student and visiting researcher training and supervision under the guidance of the grant holder.
11. Participate in, and in some cases lead, outreach activities on behalf of the group.
12. Contribute to communal activities of the Institute/University (e.g., sustainability initiatives).
13. Participate in local research-related activities such as journal clubs, training sessions, seminar series etc.
14. Assist in assessment of research communications and data within the group.

ESSENTIAL CRITERIA:

1. *Have or about to obtain a PhD in Microbiology, Immunology or Vaccinology. (*Must be obtained within 3 months of starting employment).
2. Substantial relevant research experience in vaccinology, microbiology, immunology, flow cytometry, tissue culture, immunoassay, histology.
3. Microbiological experience in handling Gram-negative bacteria.
4. Home Office license holder for animal research.
5. Evidence of current experience on in vivo infection using mammalian models (e.g., mice) including with neonatal infection models.
6. Strong in silico analysis skills.
7. Sufficient breadth and depth of specialist knowledge in the field of vaccinology.
8. Ability to contribute to broader management and administrative processes.
9. Ability to communicate complex information clearly.
10. Demonstrate strong initiative and independence in thought and work.
11. Demonstrable intellectual ability.
12. Ability to assess and organise resources.
13. Outstanding oral and written communication skills.
14. Demonstrate capacity to work within a highly collaborative team to support/train other team members as appropriate.
15. Be prepared to occasionally work outside normal work hours as required by the nature of experiments in animal models.

DESIRABLE CRITERIA:

1. Experience in molecular cloning, protein expression and purification.
2. Experience in supervision/training of students within the laboratory.
3. Experience developing and implementing outreach programmes at local, national, and/or international levels.
4. Experience presenting research at national and international conferences.
5. Sufficient breadth and depth of specialist knowledge in research methods and techniques within established research programmes at QUB.
6. Specialist knowledge of in silico proteomics analyses and handling of software packages to predict T cell epitopes and antigenicity of proteins.